NOTULAE SYSTEMATICAE AD FLORAM SINENSEM IV.[1]

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Carpinus Chowii, sp. nov.

Arbor ad 5 m. alta; rami cinereo-brunnei, glabri; gemmae conico-ovoideae, 4 mm. longae, acutae, rufescentes, glabrae, perulis numerosis obtusiusculis ciliolatis. Folia ovata, circiter 3.5 cm. longa et 2 cm. lata, acuta, basi rotundata vel interdum subcuneata, grosse et subsimpliciter dentato-serrata dentibus mucronulatis, supra costa media puberula excepta glabra, subtus costa venisque pilosis et axillis barbulatis exceptis glabra, venis utrinsecus 8–10 et 2.5–3 mm. distantibus; petioli graciles, ad 8 mm. longi, puberuli. Infructescentia satis densa, ad 3 cm. longa, pedunculo 1.5 cm. longo; bracteae chartaceae, semi-ovatae, 10–12 mm. longae et 6–9 mm. latae, reticulatae, in latere convexo grosse et sparse lobato-dentatae dentibus 4–5 magnis, in latere recto interdum ad apicem serrato et basi lobo inflexo parvo in bracteis sterilibus deficiente instructae; nuculae late ovoideae, 4 mm. longae, glabrae, leviter costatae.

Tree to 5 m. high; branchlets grayish brown, glabrous; buds ovate-conical, acute, reddish, glabrous, 4 mm. long, with many imbricate obtusish ciliolate scales. Leaves ovate, acute, rounded or sometimes subcuneate at base, coarsely and subsimply mucronate-dentate-serrate, glabrous except puberulous along the midrib above, glabrous except pubescent along the midrib and lateral veins and with axillary tufts of hairs beneath, veins 8–10 pairs, 2.5–3 mm. distant, lamina to 3.5 cm. long, 2 cm. broad; petiole slender, puberulous, to 8 mm. long. Infructescence rather dense, to 3 cm. long, peduncle 1.5 cm. long; bracts chartaceous, semiovate, reticulate, 10–12 mm. long, 6–9 mm. broad, convex side coarsely and sparsely lobate-dentate with 4–5 large teeth, straight side occasionally serrate at apex, with a minute inflexed lobe at base; nutlet broadly ovoid, glabrous, slightly ribbed.

Hopei: Fang-shan, alt. 500 m., common, *H. F. Chow*, no. 41730 (type), Oct. 5, 1931.

A very distinct species of the section Eucarpinus characterized chiefly by the rather small loosely veined, coarsely and nearly simply dentate-serrate leaves with mucronate teeth and coarsely and sparsely lobate-dentate fruiting bracts. *Carpinus Chowii* is

[1] For I–III. see Vol. XI. 48–50, 224–228; XII. 151–156.

apparently closely allied to *C. Turczaninowii* Hance var. *ovalifolia* Winkler, but the latter differs in more closely doubly serrate leaves and much more finely serrate but not lobulate bracts.

Carpinus Chuniana, sp. nov.

Arbor; ramuli graciles, pubescentia villosa flavescente vestiti; gemmae globosae, 1 mm. diam., perulis paucis rotundatis imbricatis. Folia membranacea, firma, ovata vel elliptico- ad oblongo-ovata, 8–11 cm. longa et 4–6 cm. lata, acuta vel breviter acuminata, basi cordata, irregulariter et breviter duplicato-serrata vel subsimpliciter serrata, supra costa puberula excepta glabra, subtus costa nervisque pilosis et axillis barbulatis exceptis glabra, utrinque glanduloso-punctata et reticulata, nervis utrinsecus 15–16 et 5–8 mm. distantibus trabeculis satis congestis conjunctis, petioli 8–10 mm. longi, villosuli. Infructescentia densa, 8–11 cm. longa et ad 4 cm. lata, rhachi sericeo-villosula, pedunculo ad 3 cm. longa villosulo; bracteae dense imbricatae, late semi-ovatae, ad 2.5 cm. longae et 1.3 cm. latae, acutae, in latere convexo breviter dentato-serratae, in latere recto remote serrulatae et basi leviter inflexae, reticulatae, utrinque in costa hirtellae; nuculae leviter compressae, subgloboso-ovoideae, 4 mm. longae et latae, conspicue 8-costatae, glabrae et glandulis resinosis aurantiacis conspersae.

Tree; young branchlets slender, yellowish villous-pubescent; buds globose, 1 mm. in diam., with few imbricate rounded scales. Leaves membranaceous, firm, ovate or ovate-elliptic to ovate-oblong, acute to shortly acuminate, cordate at base, shallowly and irregularly doubly or nearly simply serrate, glabrous except puberulous along the midrib above, glabrous except pilose along the midrib and veins and with axillary tufts of hairs beneath, glandulose-punctate and reticulate on both surfaces, 8–11 cm. long, 4–6 cm. broad, veins 15–16 pairs, 5–8 mm. distant; petiole 8–10 mm. long, villous-tomentulose. Infructescence dense, 8–11 cm. long, to 4 cm. broad, rachis sericeous-villosulous, peduncle slender, to 3 cm. long, villosulous; bracts densely imbricate, broadly semi-ovate, acute, convex side shallowly dentate-serrate, straight side remotely serrate and slightly inflexed at base, to 2.5 cm. long, 1.3 cm. broad, reticulate, sparsely hirtellous along the midrib; nutlet slightly compressed, broadly rounded-ovate, 4 mm. long and broad, 8-ribbed, punctate with orange resinous glands, glabrous.

KWANGTUNG: Lokchang, *C. L. Tso*, no. 20872 (type), May 31, 1929.

A distinct species of the section Eucarpinus, characterized by the large reticulately veined leaves, long, dense infructescence and large bracts shallowly dentate-serrate on the convex side and

remotely dentate-serrate down to the base on the straight side. *Carpinus Chuniana* is closely allied to *C. Fargesiana* Winkl., but differs in the much larger cordate leaves and in the bracts being neither lobate-dentate on the convex side nor dentate-serrate to the base on the straight side.

Raphiolepis kwangsiensis, sp. nov.

Frutex; ramuli juniores glabri. Folia coriacea, lanceolata, circiter 6 cm. longa et 1.5 cm. lata, basi anguste cuneata et in petiolum marginatum circiter 1.5 cm. longum decurrentia, apice obtuse acuminata, obtuse remoteque serrata et leviter revoluta, supra lucide viridia, subtus fuscescentia, utrinque glabra et leviter reticulata rete leviter elevato, costa supra manifeste subtus leviter elevata. Panicula fructifera circiter 6 cm. longa et 4 cm. diam.; fructus globosus, pedicellatus, 7 mm. diam., niger.

Shrub; young branchlets glabrous, leaves coriaceous, lanceolate, narrowly cuneate and decurrent at base, obtusely acuminate at apex, remotely and obtusely serrate and slightly revolute along the margin, shining green and glabrous and reticulate with elevated midrib above, glabrous and finely reticulate with slightly elevated midrib beneath, about 6 cm. long, 1.3–1.6 cm. broad, petioles winged, about 1.5 cm. long. Flowers unknown. Fruiting panicles 6 cm. long, 4 cm. in diam.; fruits globose, pedicellate, black, 7 mm. in diameter.

KWANGSI: Me-kom, Seh-feng Dar-shan, S. Nanning, alt. 800 m., *R. C. Ching*, no. 8360 (type), Nov. 3, 1928.

Closely allied to *R. indica* Lindley, from which it differs in the lanceolate leaves.

Raphiolepis lanceolata, sp. nov.

Frutex; ramuli glabri. Folia coriacea, lineari-lanceolata, 2.5–6.5 cm. longa et 5–10 mm. lata, obtusa vel obtuse acuminata, basi cuneata et in petiolum 2–3 mm. longum marginatum decurrentia, glabra, valde remote et obtuse serrata et leviter revoluta, supra nitentia et rugosa, subtus laxe reticulata. Fructus globosus, 4 mm. diam., pedicellatus, niger.

Shrub; branchlets glabrous. Leaves coriaceous, linear-lanceolate, narrowly cuneate and decurrent at base, obtuse to obtusely acuminate at apex, shining green and glabrous and rugose with elevated midrib above, glabrous and slightly reticulate with prominent midrib beneath, very remotely and obtusely serrate and slightly revolute along the margin, 2.5–6.5 cm. long, 0.5–1 cm. broad; petioles winged, 2–3 mm. long. Fruits globose, black, pedicelled, 4 mm. in diam.

KWANGSI: Seh-feng Dar-shan, S. Nanning, alt. 775 m., *R. C. Ching*, no. 8060 (type). Oct. 21, 1928.

Closely allied to *R. gracilis* Nakai, from which it differs in its very narrow, remotely serrate, linear-lanceolate leaves and in its smaller fruits.

Torricellia angulata Oliv. var. **intermedia** (Harms), var. nov.

Torricellia intermedia Harms in Bot. Jahrb. XXIX. 507 (1900).—Wangerin in Engler, Pflanzenr. IV.–229, p. 33 (1910).

SZECHUAN: Nanchuan, T'ai-ho-tung, *Bock & Rosthorn*, no. 1542, Sept. 1891 (type of *T. intermedia* Harms); Mt. Omei, side of thicket, alt., 1800–2000 m., *F. T. Wang*, no. 23297, July 10, 1931 (tree); between Pai-kuo-wan and Moso-ying, *C. Schneider*, no. 620 (arborescent shrub to 4 m.). YUNNAN: "plaine de Tché-hai," alt. 2500 m., *E. E. Maire* (Arnold Arb. distr. no. 294); without precise locality, *G. Forrest*, no. 10910. HUNAN: "ad minas Hsikwangschan prope urbem Hsinhwa," alt. 300–900 m., *H. Handel-Mazzetti*, no. 11773, May 9, 1918. KWANGSI: Yeo-mar-shan, N. Hin-yen, alt. 1225 m., *R. C. Ching*, no. 7237, Aug. 31, 1928.

This variety differs from the type in the leaves being coarsely mucronate-dentate betweeen the lobes and in the usually sparingly pubescent or puberulous veins of the under surface. Though Wilson's no. 4611 from Taning-hsien, eastern Szechuan is somewhat intermediate between the type and the variety, as it has a few teeth between some of the lobes, the specimens cited above are decidedly different from the type in their leaves being coarsely toothed all around between the lobes and merit to be distinguished as a variety.

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